IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	GRONAU et al.	Atty. Docket No.:	AP10478
Serial No.:	10/520,485	Art Unit:	3683
Filed:	8/23/2005	Examiner:	NGUYEN, XUAN LAN T

For: Method for Controlling the Driving Performance of a Vehicle

Mail Stop RCE
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

REQUEST FOR CONTINUED EXAMINATION

Dear Sir:

In response to the Office Action dated 9 May, 2008, Applicants request continued examination under 37 CFR 1.114. The Commissioner is authorized to charge the fee under 37 CFR 1.17(e) in the amount of $810.00 to USPTO Deposit Account No. 50-2570.

Please, amend the claims as listed on pages 2-4.

PATENT CLAIMS:

Claims 1-19: Canceled

20. (Previously Presented) The method as claimed in claim 21,
wherein the quantity is also modified in dependence on the wheel-individual air pressure of the tires.

21. (Currently Amended) A method of controlling the driving performance of a vehicle with pneumatic tires during a turn in which the air pressure in individual tires is monitored for loss of tire pressure, the method comprising the steps of
determining a loss of tire pressure at a front wheel,
determining that the vehicle is in a cornering maneuver, wherein the tire exhibiting the reduced tire pressure is associated is located on the outside of the turn,
determining or predicting an unstable driving condition, and
reducing transverse dynamics during [[a]] the cornering maneuver ~~where a reduced tire pressure prevails at the tire of a front wheel, when the tire exhibiting the reduced tire pressure is associated with the outside wheel in a turn~~,
wherein the reduction is adapted to the degree of tire pressure loss.

22. (Currently Amended) The method as claimed in claim 21,
wherein in accordance with the reduced tire pressure and the position of the tire with a reduced tire pressure ~~and/or~~ and the number of the wheels with tires with a reduced tire pressure and quantities describing the driving situation, the driving speed is reduced ~~in particular in accordance with a reduction of the vehicle drive torque~~.

23. (Withdrawn) A method of controlling the driving performance of a vehicle in with which at least one vehicle component is monitored for flaws, wherein the vehicle has an actively controllable chassis, the method comprising the steps of
- determining a flaw by monitoring quantities associated with individual actuators of the chassis system, wherein the flaw is at least one error in these quantities,

- determining or predicting an unstable driving condition and
- modifying a control quantity influencing the transverse dynamics of the vehicle in dependence on the magnitude of the flaw when an unstable driving condition is determined or predicted.

24. (Withdrawn) The method as claimed in claim 23,
wherein the quantity is also modified in dependence on the deviation of the magnitude of error.

25. (Withdrawn) The method as claimed in claim 23,
wherein in accordance with the magnitude of error and the position of the actuator with the magnitude of error and the number of actuators where an error of the quantity occurs and quantities describing the driving situation, the driving speed is reduced in particular in accordance with a reduction of the vehicle drive torque.

26. (Withdrawn) The method as claimed in claim 23,
wherein an error of the actuator is an error that can be associated with a position of the vehicle and which is in a correlation to a wheel, such as a defective shock absorber, defective (air) cushioning systems, and like devices.

27. (Withdrawn) The method as claimed in claim 23,
wherein the quantity is modified when a cornering maneuver is detected.

28. (Withdrawn) The method as claimed in claim 27,
wherein the quantity influencing the transverse dynamics is modified when the flaw occurs at an outside wheel in a turn.

29. (Withdrawn) The method as claimed in claim 23,
wherein it is found out in accordance with at least one element out of the group consisting of the steering angle, the rotational behavior of the wheels, and the yaw rate, at which location the flaw occurs, and the quantity influencing the transverse dynamics is accordingly modified during cornering.

30. (Withdrawn) The method as claimed in claim [[18]] 23,
wherein the quantity influencing the transverse dynamics is a value of a single-track model influencing an additional yaw torque of a vehicle stability control to be generated.

31. (Withdrawn) The method as claimed in claim 30,
wherein the value is a targeted friction value between tire and road which is limited in accordance with the flaw.

32. (Previously Presented) The method as claimed in claim 21,
wherein the quantity influencing transverse dynamics is a threshold value that determines a driving condition with a lateral acceleration critical in terms of rollover, and rollover about a vehicle axle oriented in the longitudinal direction of the vehicle will occur when the threshold value is exceeded.

33. (Previously Presented) The method as claimed in claim 32,
wherein the threshold value is lowered.

34. (Previously Presented) The method as claimed in claim 21,
wherein the quantity to be modified is a value indicative of the difference between the vehicle reference speed and the wheel rotational speed of each wheel in a cornering maneuver where ABS braking is carried out with ABS control.

35. (Currently Amended) ~~The method as claimed in claim 34~~ A method of controlling the driving performance of a vehicle with pneumatic tires during a turn in which the air pressure in individual tires is monitored for loss of tire pressure, the method comprising the steps of
determining a loss of tire pressure at a rear wheel,
determining that the vehicle is in a cornering maneuver, wherein the tire exhibiting the reduced tire pressure is associated is located on the outside of the turn
determining or predicting an unstable driving condition and

~~wherein when the wheel with the reduced tire pressure is a rear wheel, the~~ performing ABS control ~~is performed~~ according to the SelectLow principle.

36. (Withdrawn) The method as claimed in claim 23,
wherein the value of the modification is taken into account in accordance with a performance graph.

REMARKS

Drawing Objections

The drawing was objected to for not showing every feature of the invention specified in the claims. The Examiner, however, did not indicate which feature is missing. The claims deal with tire pressure monitoring, and thus Applicants believe that the Examiner might find tire pressure sensors to be missing.

None of the claims require tire pressure sensors. As the specification states in the last complete paragraph on page 7, in one embodiment of the invention, the tire pressure monitoring system evaluates the signals of the four wheel speed sensors. Wheel speed sensors, however, are shown in the drawing. Tire pressure sensors located in the tires are optional.

Accordingly, Applicants assert that all features specified in the claims are shown in the drawing.

Claim Objections

Claim 22 was objected to for containing "and/or."

The term "and/or" has been replaced with "and." Further, other optional language has been deleted from the claim.

Claim Rejections – 35 U.S.C. § 112

Claims 20-22 and 32-25 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because the last three lines of claim 21 were unclear and because claim 35 apparently contradicted claim 21, on which it indirectly depended.

The limitations of claim 21 have been rearranged to clarify that the tire with the reduced tire pressure is on the outside of the turn.

Claim 35 has been amended to be an independent claim only including meaningful limitations so that it is clear that claim 35 only relates to a method applying where an outside rear tire is affected by pressure loss.

Claim Rejections – 35 U.S.C. § 102

Claims 20-22 and 32-25 were rejected under 35 U.S.C. § 102 (b) as being anticipated by Hrovat et al., US Patent 5,696,681.

Hrovat deals with sudden tire ruptures and thus with a "digital" situation: The tire pressure flag is set to either 1 or 0 (col. 3, lines 14-20). If the flag is set to 1, no brake force is applied to the affected wheel (col. 4, lines 29-31). There are no degrees. Further, Hrovat aims to reduce the lateral velocity to zero (col. 4, lines 15-16), which means that the desired vehicle path is a *straight* line.

The method of the present invention is not limited to sudden *total* pressure loss. It will also adapt the vehicle dynamics when a *partial* tire pressure loss is detected (page 9, last paragraph, page 5, first paragraph). Furthermore, the present invention aides the driver during turn maneuvers and adapts the lateral dynamics to maneuver the vehicle *around the turn*.

Claim 21 has been amended to clarify that the invention recognizes degrees of tire loss and adapts the vehicle's transverse dynamics accordingly. Since Hrovat does not recognize degrees of tire loss, Applicants believe that claim 21 is allowable.

Claims 20, 22, 33, and 34 depend on claim 21 and are thus believed to be allowable as well.

Claim 35 includes that in the case of a tire pressure loss in a curve-outer rear wheel the select-low principle is applied during ABS control. As commonly known, select-low means that the rear brakes share a common control and that the brake pressure is controlled, so neither one of the rear wheels locks. Accordingly, both rear wheels are braked—albeit at a reduced pressure when required—in contrast to Hrovat's method.

CONCLUSION

Applicants believe that the claims as amended are allowable in view of the above arguments and that the drawings show all features specified in the claims.

Respectfully submitted,

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